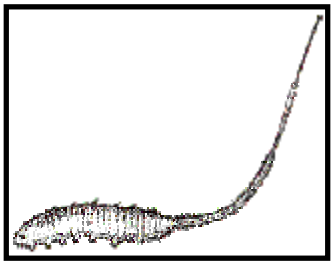
# "Bug of the Month"

With the approach of spring (it will come eventually), some of the first insects to be seen moving around are the pollinators. As the weather warms and the days lengthen, some plants and shrubs begin to flower. There to help are a number of insects that play an important role in pollinating these plants. Some the first insects seen in the Pacific Northwest are the honeybees. The honeybee is not, however, the featured "Bug of the Month. Most people know what a honeybee looks like, or do they? The honeybee is an insect that most people try to avoid for a good reason - they have a stinger. For the same reason, many insect predators have learned to avoid them. Mimicking the appearance and behavior of the honeybee allows other, non-stinging, insects to avoid predation. A good example of honeybee mimicry in the Pacific Northwest is the drone fly (*Eristalis* sp.). The drone fly , also called flower fly or hover fly, is in the family Syrphidae that contains a number of species that mimic bees and wasps.

**WHAT DO THEY LOOK LIKE?** The adult drone fly (image at right) looks very similar to a honeybee (image below). It is about the same size as a honeybee and has orange and black markings on the abdomen. The drone fly even pumps the abdomen like a honeybee while feeding on the nectar of flowers. Taking a close look, however, can reveal a number of important differences. One doesn't have to get close enough to risk getting stung to see the differences. First, not all of the orange bands on the abdomen go completely across. Second, the waist of a honeybee is constricted between the thorax and the abdomen. A drone fly has a thick waist. Third, the drone fly has only one pair of wings, while a honeybee has two pairs of wings. Fourth, the eyes of the drone fly take up more of the head than the eyes of the honeybee. Fifth, the honeybee has longer antennae than the drone fly. Finally, the drone fly hovers and darts around more while in flight than the honeybee.

**WHAT DO THEY DO?** The drone fly is a beneficial insect that helps pollinate flowering plants. The larva of the drone fly is a rat-tailed maggot. The larva has a long tail (hence the name) that is actually a breathing tube used by the maggot to survive very wet environments. The maggots are found in stagnant waters that are high in organic matter. At livestock facilities, rat-tailed maggots can be found in manure lagoons or settling ponds, poorly drained areas collecting runoff from manure mounds or silage pits, and in water tanks and ditches with stagnant water. Eggs are laid in the spring at suitable sites and hatch in about a week. Maggots develop through the summer and pupate, usually in late July and August. The pupae cannot survive very wet environments, so the larvae migrate from their breeding site to find drier and more protected sites. It is during the migration that the rat-tailed maggots are the most noticeable. The pupae are frequently found near larval breeding sites, under debris and equipment, or behind walls. The pupae are grey in color, hard and have a shorter remnant of the breathing tube.



**MANAGEMENT.** The drone fly is harmless to livestock, pets, plants and people.

**MORE QUESTIONS?** Please do not hesitate to give your "Bug Docs" a call at comm.: (360) 315-4450, DSN: 322-4450 or you can e-mail us at MEI@ndvecc.navy.mil.